

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
9 December 2004 (09.12.2004)

PCT

(10) International Publication Number  
**WO 2004/107480 A3**

(51) International Patent Classification<sup>4</sup>: H01M 4/48,  
4/50, 4/52

(21) International Application Number:  
PCT/CA2004/000770

(22) International Filing Date: 27 May 2004 (27.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/473,476 28 May 2003 (28.05.2003) US

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

(88) Date of publication of the international search report:  
3 November 2005

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: LITHIUM METAL OXIDE ELECTRODES FOR LITHIUM CELLS AND BATTERIES

(57) Abstract: A lithium metal oxide positive electrode for a non-aqueous lithium cell or battery is disclosed. The positive electrode comprises a lithium metal oxide having a layered structure and a general formula, after in-situ or ex-situ oxidation, of  $\text{Li}_x\text{Mn}_y\text{M}_{1-y}\text{O}_z$ , wherein  $0 \leq x \leq 0.20$ ,  $0 < y < 1$ , manganese is in the 4+ oxidation state, and M is one or more the first row transition metals: Ti, V, Cr, Mn, Fe, Co, Ni or Cu, or other specific other canons: Al, Mg, Mo, W, Ta, Si, Sn, Zr, Be, Ca, Ga, and P, which have an appropriate ionic radii to be inserted in to the structure without unduly disrupting it. Usage of the materials of the invention in lithium cells and batteries is disclosed. A process is disclosed for formation of materials of the invention.

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1A10 Rec'd PCT/PTO 28 NOV 2005

10/558445

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